

ABSTRACT

A dual coil induction cooking system and method for heating ferrous and non-ferrous cooking vessels. The system includes a first resonant circuit for inducing a current in a ferrous metal cooking vessel at a first frequency and a second resonant circuit, wired in a parallel combination with the first resonant circuit, for inducing a current in a non-ferrous metal cooking vessel at a second frequency. The system also includes a power source for powering the parallel combination, so that one of the first and the second resonant circuits is coupled to supply power through the parallel combination to a respective one of the cooking vessels. A method for coupling power to a load includes sweeping a parallel combination of resonant circuits with a variable frequency power, detecting a resonant frequency response corresponding to a metallic composition of the load, and simultaneously powering the parallel combination of resonant circuits at a frequency corresponding to the detected resonant frequency.